

Application No. 10/695,129
Amendment A dated December 22, 2005
Reply to Office Action mailed July 22, 2005

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0034] with the following amended paragraph:

[0034] Figure 6 [[5]] illustrates features of a lens that may be incorporated into a port. This illustration is intended as exemplary and the present invention is not limited to this example. The lens 500 has a diameter 502 of 2 millimeters and a clear aperture of 1.6 millimeters. The lens thickness 506 is 3.41 millimeters +/- 0.01 millimeter. The surface accuracy of the focusing lens surface 510 has less than 0.3 micron sag error over the clear aperture of the lens and less than 0.2 micron local surface errors. The lens surface should not have visible scratches, digs, or bubbles under a 20x microscope. The centricity of the lens is +/- 25 microns and the tilt is +/- 1 degree.

Please replace paragraph [0035] with the following amended paragraph:

[0035] These tolerances are exemplary in nature and help ensure that the lens is capable of effectively coupling a light source to a receiver. A significant advantage of this lens, as is illustrated in Figures 5A and 5B 6A and 6B below, is that reflections of the image back to the source are reduced or eliminated because the lens introduces aberrations without sacrificing the ability of the lens to effectively couple light. The present invention is, therefore, not limited to these tolerances or to this specific design, but extends to all lens or ports that reduce reflections back to the light source.

Please replace paragraph [0037] with the following amended paragraph:

[0037] Figures 5A and 5B 6A and 6B illustrate how the lens described above focuses a source on a fiber. Figure 5A [[6A]] represents the light source and Figure 5B [[6B]] illustrates the image of the source on the receiver or optical fiber. In this example, the points 601, 602, 603, 604, and 605 are selected at the source 600. If the lens focuses these source points on the receiver, then the image would be points as well. The lens described herein, however, introduces aberrations or slightly defocuses the points 601-605. The image is represented on the receiver 610 as images 611, 612, 613, 614, and 615. The image 611 is from the point 601, the image 612 is from the point 602, the

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image 613 is from the point 603, the image 614 is from the point 604, and the image 615 is from the point 605. The images 611, 612, 613, 614, and 615 are aberrated or slightly defocused. However, the aberrated images are within an envelope 616 that permits effective coupling with the optical fiber. The aberrated images have good containment and are sufficiently far away from the edges of the fiber.